

What Is Claimed Is:

1. An isolated nucleic acid molecule comprising a polynucleotide having a nucleotide sequence at least 95% identical to a sequence selected from the group consisting of

(a) a nucleotide sequence encoding a TR1 receptor polypeptide having the complete amino acid sequence in SEQ ID NO:2 or SEQ ID NO:4;

(b) a nucleotide sequence encoding a polypeptide having the amino acid sequence at positions from about 1 to about 380 in SEQ ID NO:2 or at positions from about 1 to about 374 in SEQ ID NO:4;

(c) a nucleotide sequence encoding the TR1 receptor polypeptide having the complete amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 75899;

(d) a nucleotide sequence encoding the mature TR1 receptor polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 75899;

(e) a nucleotide sequence encoding the TR1 polypeptide fragment having an amino acid sequence at positions from about 1 to about 240 in SEQ ID NO:2 or SEQ ID NO:4;

(f) a nucleotide sequence encoding the TR1 polypeptide fragment having an amino acid sequence at positions from about 241 to about 380 in SEQ ID NO:2 or at positions from about 241 to about 374 in SEQ ID NO:4; and

(g) a nucleotide sequence complementary to any of the nucleotide sequences in (a), (b), (c), (d), (e) or (f).

2. An isolated nucleic acid molecule comprising a polynucleotide which hybridizes under stringent hybridization conditions to a polynucleotide having a nucleotide sequence identical to a nucleotide sequence in (a), (b), (c), (d), (e), (f) or (g) of claim 1.

3. An isolated nucleic acid molecule comprising a polynucleotide which encodes the amino acid sequence of an epitope-bearing portion of a native TR1 receptor polypeptide having an amino acid sequence in (a), (b), (c), (d), (e) or (f) of claim 1.

4. The isolated nucleic acid molecule of claim 3, which encodes an epitope-bearing portion of a native TR1 receptor polypeptide selected from the group consisting of: a polypeptide comprising amino acid residues from about -2 to about 31 in SEQ ID NO:2; a polypeptide comprising amino acid residues from about 45 to about 182 in SEQ ID NO:2; a polypeptide comprising amino acid residues from about 208 to about 258 in SEQ ID NO:2; and a polypeptide comprising amino acid residues from about 276 to about 357 in SEQ ID NO:2.

5. The isolated nucleic acid molecule of claim 1 further comprising a nucleotide sequence encoding a transmembrane domain.

6. The isolated nucleic acid molecule of claim 5, wherein said transmembrane domain has an amino acid sequence contained in a TNF family receptor.

7. The isolated nucleic acid molecule of claim 6, wherein said transmembrane domain comprises the TNF-R2 amino acid sequence shown at positions from about 258 to about 287 in SEQ ID NO:5.

8. A method for making a recombinant vector comprising inserting an isolated nucleic acid molecule of claim 1 into a vector.

9. A recombinant vector produced by the method of claim 8.

10. A method of making a recombinant host cell comprising introducing the recombinant vector of claim 9 into a host cell.

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11. A recombinant host cell produced by the method of claim 10.
12. A recombinant method for producing a TR1 receptor polypeptide, comprising culturing the recombinant host cell of claim 11 under conditions such that said polypeptide is expressed and recovering said polypeptide.
13. An isolated TR1 receptor polypeptide having an amino acid sequence at least 95% identical to a sequence selected from the group consisting of:
 - (a) the amino acid sequence of the TR1 receptor polypeptide having the complete amino acid sequence in SEQ ID NO:2 or SEQ ID NO:4;
 - (b) the amino acid sequence of the polypeptide having the amino acid sequence at positions from about 1 to about 380 in SEQ ID NO:2 or at positions from about 1 to about 374 in SEQ ID NO:4;
 - (c) the amino acid sequence of the native TR1 receptor polypeptide having the complete amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 75899;
 - (d) the amino acid sequence of the mature native TR1 receptor polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 75899;
 - (e) the amino acid sequence of the TR1 polypeptide fragment having an amino acid sequence at positions from about 1 to about 240 in SEQ ID NO:2 or SEQ ID NO:4;
 - (f) the amino acid of the TR1 polypeptide fragment having an amino acid sequence at positions from about 241 to about 380 in SEQ ID NO:2 or at positions from about 241 to about 374 in SEQ ID NO:4; and
 - (g) the amino acid sequence of an epitope-bearing portion of any one of the polypeptides of (a), (b), (c), (d), (e) or (f).
14. The isolated polypeptide of claim 13 further comprising a transmembrane domain.

15. The isolated polypeptide of claim 14, wherein said transmembrane domain has an amino acid sequence contained in a TNF family receptor.

16. The isolated polypeptide of claim 15, wherein said transmembrane domain comprises the TNF-R2 amino acid sequence shown at positions from about 258 to about 287 in SEQ ID NO:5.

17. An isolated polypeptide comprising an epitope-bearing portion of the native TR1 receptor protein, wherein said portion is selected from the group consisting of: a polypeptide comprising amino acid residues from about -2 to about 31 in SEQ ID NO:2; a polypeptide comprising amino acid residues from about 45 to about 182 in SEQ ID NO:2; a polypeptide comprising amino acid residues from about 208 to about 258 in SEQ ID NO:2; and a polypeptide comprising amino acid residues from about 276 to about 357 in SEQ ID NO:2.

18. An isolated antibody that binds specifically to a TR1 receptor polypeptide of claim 13.

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